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09/713,129	11/15/2000	Patrick Lahiri Charriere	10-23-2-9	3350

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EXAMINER	
MOORE, IAN N	

ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/713,129	Applicant(s) CHARRIERE ET AL.	
	Examiner Ian N Moore	Art Unit 2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-15 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-15 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 5.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawing, **FIG. 4**, is objected to under 37 CFR 1.83(a) because they fail to show the brief description of the block diagram which consists of the components **50,52,54,56, and 58** as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: the reference label of **the step 42** (page 4, line 10). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to **a single paragraph (note that there are four (4) paragraphs on page 7)** on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be

avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The following title is suggested: **Data Packet Length Indication for Mobile Telecommunication Systems**.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claim 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hippelainen (WO 99/33230) in view of Petersen (U.S. 6,675,222) and well-established teaching in art.

Regarding Claims 1 and 8, Hippelainen'230 discloses a mobile telecommunications system (see FIG. 2, mobile telecommunication system), apparatus and method for providing an indication of the length of a data payload (see FIG. 5, Length Code L) to be transported in a packet (see FIG. 4, a Packet), comprising:

a. means (52) for assessing said length of data to determine appropriate units, from a plurality of possible units (see page 12, lines 11 to page 13, lines 35; note that the system determines any specific type of packet/payloads and its associated packet/payload length (i.e. appropriate units is the combined system of a specific type of packet/payloads and its packet/payload length) from a plurality possible type of packet/payload (i.e. the packet/payload consisting control/signaling values or data/traffic values).), in which the length should be expressed (see FIG. 4, payload PL; page 4, lines 14 to page 5, line 11; note that of the length of the payload for any type of packet is described in **bits**);

b. means (56) for setting a granularity field (see FIG. 5, C/S Flag bit) to define said appropriate units (see page 11, lines 10 to page 12, lines 35 and page 13, lines 6-35; note that C/S bit defines a specific type of packet/payloads and its associated packet/payload length by determining whether the packet/payload contains the control/signaling value or traffic data value information. Note that each type of packet/payload contains various/different length of data); and

c. means (58) for setting the length indicator field (see FIG. 5, Length Code L) to indicate the data length (see page 5, lines 7-12; and see page 11, lines 30 to page 12, lines 6; note that Length code L indicates various/different length in **bits** of the data packet/payload).

Hippelainen'230 does not explicitly disclose setting a granularity field to define said units in which said length of data is to be indicated in a data length indicator field.

However, the above-mentioned claimed limitations are taught by Petersen'222 and well-established teaching in the art. In particular, Petersen'222 teaches setting a length indicator field to indicate the data length in **bytes** (see FIG. 6, Payload length 620; col. 12,

line 31-36; note that payload length field 620 specifies the number of payload in bytes). Hippelainen'230 teaches adding a granularity/additional field in the header to identify the type of packet/payload and its associated length, and setting a length indicator field to indicate the data length in bits as described above. The packet/payload length is pre-determined/defined according to the standard/restriction as either in bytes or bits.

Thus, it is well known that one having ordinary skill in art to set a granularity/extra field to define said appropriate units in which said length of data is to be indicated in a data length indicator field, that is, by adding/modifying an additional field (i.e. taught per Hippelainen'230 teaching) to pre-determine/pre-define the units of the pack length in order to handle both type of packet/payload length units (i.e. as **bits** taught by Hippelainen'230 and as **bytes** taught by Petersen'222) for packet/payload length field, rather than restricting into one specific pack length unit.

In view of this, having the system of Hippelainen'230 and then given the teaching of Petersen'222 and well-established teaching in art, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Hippelainen'230, by providing a mechanism to handle both payload length units by modifying/adding one extra field in the header to identify the payload length units as taught by Petersen'222 and well-established teaching in art. The motivation to combine is to obtain the advantages/benefits taught by Petersen'222 since Petersen'222 states at col. 12, line 31-36 that such modification would enable to identify the length of the cell. Also, the motivation to combine is to obtain the advantages/benefits taught by Hippelainen'230 since Hippelainen'230 states at page 4, line 35 to page 5, lines 1, that such modification would

have an advantage that the packet/payloads of different/various lengths can be transmitted in the transmission network without any padding bits.

Regarding claim 13, Hippelainen'230 discloses in a mobile telecommunications system (see FIG. 2, mobile telecommunication system), an indicator of the length of data (see FIG. 5, Length Code L) to be transported in a packet (see FIG. 4, Packet), wherein the packet comprises:

a granularity field (14) (see FIG. 5, C/S Flag bit) in the packet header (10) (see FIG. 5, Header, H) which defines the units (see page 11, lines 10 to page 12, lines 35 and page 13, lines 6-35; note that C/S bit defines a specific type of packets and its associated packet length by determining whether the packet contains the control/signaling value or traffic data value information. Note that each type of packet/payload contains various/different length of data); and

a length indicator field (16) (see FIG. 5, Length Code L) indicating the packet data length in the units (see page 5, lines 7-12; and see page 11, lines 30 to page 12, lines 6; note that Length code L indicates various/different length in **bits** of the data packet/payload).

Hippelainen'230 does not explicitly disclose a field in the packet header, which defines the units in which the length of the data is to be indicated; and a length indicator field indicating the units defined by the granularity field.

However, the above-mentioned claimed limitations are taught by Petersen'222 and well-established teaching in the art. In particular, Petersen'222 teaches setting a length indicator field to indicate the data length in **bytes** (see FIG. 6, Payload length 620; col. 12, line 31-36; note that payload length field 620 specifies the number of payload in bytes).

Hippelainen'230 teaches adding a granularity/additional field in the header to identify the type of packet/payload and its associated length, and setting a length indicator field to indicate the data length in bits as described above. The packet/payload length is pre-determined/defined according to the standard/restriction as either in bytes or bits.

Thus, it is well known that one having ordinary skill in art to set a granularity/extra field to define said appropriate units in which said length of data is to be indicated in a data length indicator field, that is, by adding/modifying an additional field (i.e. taught per Hippelainen'230 teaching) to pre-determine/pre-define the units of the pack length in order to handle both type of packet/payload length units (i.e. as **bits** taught by Hippelainen'230 and as **bytes** taught by Petersen'222) for packet/payload length field, rather than restricting into one specific pack length unit.

In view of this, having the system of Hippelainen'230 and then given the teaching of Petersen'222 and well-established teaching in art, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Hippelainen'230, by providing a mechanism to handle both payload length units by modifying/adding one extra field in the header to identify the payload length units as taught by Petersen'222 and well-established teaching in art. The motivation to combine is to obtain the advantages/benefits taught by Petersen'222 since Petersen'222 states at col. 12, line 31-36 that such modification would enable to identify the length of the cell. Also, the motivation to combine is to obtain the advantages/benefits taught by Hippelainen'230 since Hippelainen'230 states at page 4, line 35 to page 5, lines 1, that such modification would

have an advantage that the packet/payloads of different/various lengths can be transmitted in the transmission network without any padding bits.

Regarding claims 2 and 9, the combined system of Hippelainen'230, Petersen'222 and well-established teaching discloses all aspects of the claimed invention set forth in the rejection of Claims 1 and 8 as described above, and Hippelainen'230 further teaches wherein determining the appropriate units in which the length can precisely be expressed (see FIG. 4, Payload, PL; FIG. 6, code L 00 and length in bits=464; note that different/various data type of packet/payload (i.e. data and control payloads/packets) and its associated length code are determined for each packet/payload data. The payload, PL, length unit is correctly described according to the length table as length in bits).

Hippelainen'230 does not explicitly disclose the largest units.

However, the above-mentioned claimed limitations are taught by Petersen'222 and well-established teaching in the art. In particular, Petersen'222 teaches the largest units (see FIG. 6, Payload length 620; col. 12, line 31-36; note that payload length field 620 specifies the number of payload in bytes, which is the largest unit).

In view of this, having the system of Hippelainen'230 and then given the teaching of Petersen'222 and well-established teaching in art, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Hippelainen'230, by providing a mechanism to utilize larger byte/octet unit for the payload length, for the same motivation as stated above in Claims 1 and 8.

Regarding claims 3 and 14, the combined system of Hippelainen'230, Petersen'222 and well-established teaching discloses all aspects of the claimed invention set forth in the rejection of Claims 1 and 13, and Hippelainen'230 further teaches wherein the unit is bits, and the granularity field is one bit in length (see FIG. 4, Payload, PL, bits, and see FIG. 5, C/S field is 1 bit in length (i.e. bit 6 in the header)).

Hippelainen'230 does not explicitly disclose wherein the unit is octets, and the granularity field indicates length in octets.

However, the above-mentioned claimed limitations are taught by Petersen'222 and well-established teaching in the art. In particular, Petersen'222 teaches wherein the unit is octets (see FIG. 6, Payload length 620; col. 12, line 31-36; note that payload length field 620 specifies the number of payload in bytes/octets).

In addition, it is well known in the art that the granularity/additional field indicates length in octets, that is, by adding/modifying an granularity/additional field (i.e. taught per Hippelainen'230 teaching) to pre-determine/pre-define the units of the pack length in order handle both types of packet/payload length units (i.e. as bits taught by Hippelainen'230 and as bytes taught by Petersen'222) for packet/payload length field, rather than restricting into one specific pack length unit. Thus, the additional/granularity or C/S field of Hippelainen'230 can be modified to indicate lengths in bytes according to Petersen'222 teachings.

In view of this, having the system of Hippelainen'230 and then given the teaching of Petersen'222 and well-established teaching in art, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of

Hippelainen'230, by providing a mechanism to modify the additional or C/S field to indicate the length in byte/octet unit, for the same motivation as stated above in Claims 1 and 13.

Regarding claims 4 and 15, the combined system of Hippelainen'230, Petersen'222 and well-established teaching discloses all aspects of the claimed invention set forth in the rejection of Claims 1 and 13, and Hippelainen'230 further teaches wherein the granularity field is located in the packet header (see FIG. 5, C/S bit is in the 1st byte of the packet/payload header) adjacent the length indicator field (see FIG. 5, Length code L is in the 3rd byte of the packet/payload header).

Regarding claims 5 and 10, the combined system of Hippelainen'230, Petersen'222 and well-established teaching discloses all aspects of the claimed invention set forth in the rejection of Claims 1 and 13, and Hippelainen'230 further teaches wherein a frame (see FIG. 3, TDMA frame) is assessed to determine whether it contains more than one payload/packet unit (see FIG. 3, TDMA frame consists of 4 channels C1-C4, and each channel consist a payload (i.e.PL-1 and PL-2)), and each payload unit is assessed to determine said appropriate units (see FIG. 5, C/S bit and L code; see page 12, lines 11 to page 13, , lines 35; note that the system determines any specific type of packet/payloads and its associated packet/payload length (i.e. appropriate units is the combined system of a specific type of packet/payloads and its packet/payload length in bit) from a plurality possible type of packet/payload (i.e. the packet/payload consisting control/signaling values or data/traffic values)).

Hippelainen'230 does not explicitly disclose wherein a packet contains more than one payload.

However, the above-mentioned claimed limitations are taught by Petersen'222 and well-established teaching in the art. Petersen'222 discloses wherein the packet contains more than one payload (see FIG. 6, Cell Format 602 which contains variable number of molecules 630, 632 and 634; see col. 12, lines 36-64). Hippelainen'23 TDMA frame can be modified to function as a packet with more than one payload per Petersen'222 teaching. Thus, Hippelainen'230 packet (see FIG. 4) can be modified as a packet/frame with more than one payload.

In view of this, having the system of Hippelainen'230 and then given the teaching of Petersen'222 and well-established teaching in art, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Hippelainen'230, by providing a mechanism of a packet containing more than one payload, for the same motivation as stated above in Claims 1 and 8.

Regarding claims 6 and 11, the combined system of Hippelainen'230, Petersen'222 and well-established teaching discloses all aspects of the claimed invention set forth in the rejection of Claims 1, 5, 8 and 10, and Hippelainen'230 further teaches wherein the granularity field, and the units of the payload unit which is to be expressed in the smallest units (see FIG. 5, C/S bits; FIG. 4, Payload, PL; FIG. 6, code L 00 and length in bits=464; note that the units of each payload is described as which is the smallest units).

Hippelainen'230 does not explicitly disclose wherein the granularity field is set according to the units of the payload.

However, the above-mentioned claimed limitations are taught by Petersen'222 and well-established teaching in the art. In addition, it is well known in the art that the granularity field is set according to the units of the payload, that is, by adding/modifying an granularity/additional field (i.e. taught per Hippelainen'230 teaching) to pre-determine/pre-define/set the units of the pack length in order handle both types of packet/payload length units (i.e. as bits taught by Hippelainen'230 and as bytes taught by Petersen'222) for packet/payload length field, rather than restricting into one specific pack length unit. Thus, Hippelainen'230's payload data unit can be preset/pre-determined utilizing the granularity/additional field per well-established teaching. In addition, it is also well known in the art that when the payloads are small payload, the additional/granularity field must be set to bits in order to handle small payloads.

In view of this, having the system of Hippelainen'230 and then given the teaching of Petersen'222 and well-established teaching in art, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Hippelainen'230, by providing a mechanism to set the units/values in the additional field in accordance with the payload data unit, for the same motivation as stated above in Claims 1 and 8.

Regarding claims 7 and 12, the combined system of Hippelainen'230, Petersen'222 and well-established teaching discloses all aspects of the claimed invention set forth in the

rejection of Claims 1, 6, 8 and 11, and Hippelainen'230 further teaches wherein the granularity field, the possible units, and all the payload can be expressed in the units (see FIG. 5, C/S bits; FIG. 4, Payload, PL; FIG. 6, code L 00 and length in bits=464; note that the units of each payload is described as which is the units).

Hippelainen'230 does not explicitly disclose wherein the granularity field is set to the larger units if all the payload units are in such larger unit.

However, the above-mentioned claimed limitations are taught by Petersen'222 and well-established teaching in the art. In particular, Petersen'222 teaches setting to the larger units since all the payload units are in such larger unit (see FIG. 6, Payload length 620; col. 12, line 31-36; note that payload length field 620 specifies the number of payload in bytes, which is the larger unit. Also, the payloads are large unit since they are in bytes/octets).

In addition, it is well known in the art that the granularity field is set to the larger units if all the payload units are in such larger unit, that is, when the payloads are large payload, the additional/granularity field must be set to bytes/octets in order to handle large payload.

In view of this, having the system of Hippelainen'230 and then given the teaching of Petersen'222 and well-established teaching in art, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Hippelainen'230, by providing a mechanism to utilize larger byte/octet unit for the large payload length, for the same motivation as stated above in Claims 1 and 8.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ian N Moore whose telephone number is 703-605-1531. The examiner can normally be reached on M-F: 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 703-305-4798. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

INM
2/23/04

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PRIMARY EXAMINER